



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,582	03/17/2004	Chiyoshi Sasaki	KAW-0049	6139
23413 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103	7590 01/28/2008		EXAMINER PAPE, ZACHARY	
			ART UNIT 2835	PAPER NUMBER
			MAIL DATE 01/28/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/803,582	<b>Applicant(s)</b> SASAKI, CHIYOSHI	
	<b>Examiner</b> Zachary M. Pape	<b>Art Unit</b> 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-18 is/are pending in the application.  
     4a) Of the above claim(s) 1-7 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The following detailed action is in response to the correspondence filed 10/31/2007.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (US 6,357,514 – hereinafter, “Sasaki”) in view of Zeighami et al. (US 2003/0183371 – hereinafter, “Zeighami”).

With respect to claim 9, Sasaki teaches a heat sink comprising: a plurality of plate-like metal fins (Comprising 21 and 22) comprising a heat dissipating portion (21), said fins being linear or bent along a specific configuration (See Figs 6 and 8) and a heat receiving portion (22); a metal shield plate (1) having a plurality of slits (12) including linear (See Fig 7 which illustrates that the slits are linear) and/or curved portions into which said respective fins are inserted along said slits (See Fig 8), and press-connected to said fins by forming a concave portion (adjacent 11) and an enlarged portion (10) at the edge of said metal shield plate (See Fig 7) on both sides of said metal shield plate, wherein said concave portions are opposed to each other at a

given position on the metal shield plate (See Fig 7 where one concave portion is on one side of the plate (1) and another is on an opposite side of the plate); and a deformed portion (11) of said metal plate (1) being fixed with said heat dissipating portions which are inserted into said respective slits and fixed thereto (Wherein the mechanically deformed portion (11) of the metal plate is fixed with the heat dissipating portions (21) of the fins for at least the reason that they are fixed via the heat receiving portion (22)). Sasaki is silent as to a fin fixing member to transfix said plurality of metal fins. Zeighami teaches a plurality of heat sink fins (502) transfixed by a fin fixing member (500). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Zeighami et al. with that of Sasaki to facilitate better and more even cooling of the fins.

With respect to claim 10, Sasaki further teaches that each of said slits has a substantially same width corresponding to a thickness of said fins across the metal shield plate, and each of said slits extends toward respective one end portions of said metal shield plate in a longitudinal direction with remaining portions parallel with each other (As illustrated in Fig 4).

With respect to claim 11, Sasaki further teaches that each of said slits has a substantially same width corresponding to a thickness of said heat dissipating portion across the metal shield plate, and each of said slits spreads toward respective both end portions of said metal shield plate in a longitudinal direction with center portions parallel with each other (As illustrated in Fig 4).

With respect to claim 12, Sasaki further teaches that each of said slits has a substantially same width corresponding to a thickness of said heat dissipating portion across the metal shield plate, and each of said slits is parallel with each other in a longitudinal direction (As illustrated in Fig 4).

With respect to claim 13, Sasaki further teaches that each of said heat receiving portion and said heat dissipating portion of said fins constitutes a rectangular flat plate portion (As illustrated in Fig 4).

With respect to claim 14, Sasaki further teaches that the plurality of fins are placed in parallel in such a manner that respective heat receiving portions (22) of said fins form a single heat receiving face (That which is facing the joining portion (3)) as a whole.

With respect to claim 15, Zeighami et al. further teaches that the fin fixing member (500) comprises a heat pipe.

### ***Response to Arguments***

2. Applicant's arguments filed 10/31/2007 have been fully considered but they are not persuasive.

With respect to the Applicant's remarks to claim 9 that, "the alleged concave portion on the bottom of the plate and the alleged concave portion on the 'op of the plate of Sasaki are not opposed to each other at a given position on the metal shield plate", the Examiner respectfully disagrees. For clarity the Examiner has provided present office action (POA) Fig 1 below which clearly demonstrates that the concave

portions (adjacent 11) are opposite disposed to each other at a give position on the metal shield plate (1).

Concave portions shown opposed to each other  
at a given position on the metal plate

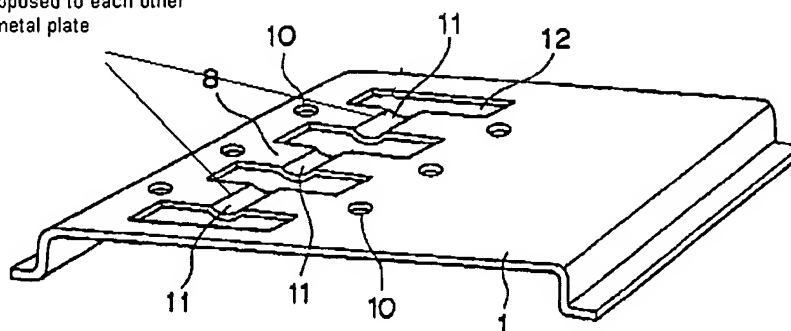


Fig 1

With respect to the Applicant's remarks that, "there is no "common sense" reason to modify the structure taught in Sasaki such that the concave portions would be opposed to each other at a given position", the Examiner respectfully notes that it was never the Examiner's position that the invention of Sasaki be modified to meet the newly recited claim language. As disclosed above, Sasaki clearly anticipates the concave portions and their respective positions.

### **Conclusion**

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. (7:00am - 5:30pm).


Application/Control Number:  
10/803,582  
Art Unit: 2835

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached at 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZMP

  
1/22/08  
JAYPRAKASH GANDHI  
SUPERVISORY PATENT EXAMINER